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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/543,534	04/05/2000	Kay Rokman	30-509	7187

7590 07/30/2002

Nixon & Vanderhye PC
1100 North Glebe Road
8th floor
Arlington, VA 22201

EXAMINER

SALVATORE, LYNDIA

ART UNIT	PAPER NUMBER
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1771

DATE MAILED: 07/30/2002 //

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/543,534

Applicant(s)

ROKMAN ET AL.

Examiner

Lynda M Salvatore

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2002.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13, 37, 38 and 41-60 is/are pending in the application.
- 4a) Of the above claim(s) 1-13, 37, 38 and 41-50 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 51-60 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 9. 6) ☐ Other: _____

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DETAILED ACTION***Response to Amendment******Election/Restrictions***

1. Newly amended claims 1-13 and 37,38, and 41-50 are directed to an invention that is independent or distinct from the invention originally claimed for the following reasons: Newly amended claims 1-13,37,38 and 41-50 have been amended such that they change the scope of the originally elected invention (i.e., a multi-layer composite comprising at least one or more cured non-woven layers).

Since applicant has received an action on the merits for the originally presented invention, this invention has been constructively elected by original presentation for prosecution on the merits. Accordingly, claims 1-13,37,38 and 41-50 are withdrawn from consideration as being directed to a non-elected invention. See 37 CFR 1.142(b) and MPEP § 821.03.

2. A restriction error on the part the Examiner has been discovered with regard to newly amended claim 37, which incorporates all of the limitations of originally filed claim 34. Originally filed claim 34 recites a multi-layer composite and *should* have been restricted with Group III claims, 35 and 36. The Examiner of record notes that claim 34 was not rejected over any prior art, which may have possibly given the Applicant the impression of having allowable subject matter if amended. Therefore, newly amended claims 37, 38, and 41-50 will also be treated as being drawn to a non-elected invention because they recite limitations drawn to multi-layered structures. The Examiner of record apologizes for any undue burden that this may cause the Applicant and as such pending claims 51-60 will be examined on the merits and a *Non-Final* office action will be issued.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 51-59 rejected under 35 U.S.C. 103(a) as being unpatentable over Helwig et al., US 6,054,022 in view of Weeks, 5,409,573.

The patent issued to Helwig et al., discloses a method for forming a non-woven glass fiber mat comprising bundles of chopped fibers (Abstract). Helwig et al., teaches that the chopped glass fibers have a lengths which can range from 3mm to 50mm and that the size of each bundle contains 50-500 fibers (Column 2, lines 60-67). Helwig et al., discloses that the basis weight range of the non-woven glass mat is from about 40g/m² to 500g/m² (Column 3, lines 5-7). Helwig et al., further discloses that the diameter of the fibers range from 16 up to a maximum of 50 microns (Column 6, lines 3-8). Additionally, Helwig et al., teaches that sizing agents may be applied to the fiber, but is not specific with regard to a particular composition (Column 6, lines 8-11). The method used to form the wet-laid fiber mat involves adding chopped glass fibers to an aqueous slurry, adding a hydrophobic agent such as a polyalkoxane defoaming agent to promote bundle formation, and forming a non-woven glass fiber mat (Column 3, lines 47-57).

Helwig et al. does not teach adding heat activated binder fibers to increase the integrity of the mat, however, the patent issued to Weeks discloses a perform glass fiber reinforced

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thermoplastic composite (Column 1, lines 59-61). Weeks teaches that the chopped glass strand bundles are adhered with thermoplastic resin particles in the form of fine denier, short cut wettable staple fibers (Column 1, lines 65-69). Weeks, further teaches that composite of reinforcing fibers and thermoplastic fibers results in a structure having excellent strength and processability (Column 2, lines 5-10).

Therefore, motivated by the desire to produce a glass fiber mat having increased strength it would have been obvious to one having ordinary skill in the art to add the thermoplastic fibers of Weeks to the non-woven glass fiber mat of Helwig et al.

5. Claim 60 is rejected under 35 U.S.C. 103(a) as being unpatentable over Helwig et al., US 6,054,022 in view of Weeks, 5,409,573 as applied to claim 51 above and further in view of Ogata et al., US 5,698,479,

The combined prior art teachings do not disclose using a polyvinyl alcohol (PVOH) or an epoxy resin as the sizing agent, however, the patent issued to Ogata et al., discloses that conventional sizing agents used for chopped glass strands may include polyvinyl alcohol, a dispersing agent such as a cationic fatty acid amide and a silane coupling agent such as epoxy silane (Column 1, lines 30-35). Ogata et al., teaches that sizing agents promote strand dispersibility and prevents them from cohering (Column 1, lines 25-29).

Therefore, motivated by the combined prior art teachings it would have been obvious to one having ordinary skill in the art at the time the invention was made to use the sizing agent taught by Ogata et al., to prevent the glass strands from cohering in the non-woven glass fiber mat of Helwig et al., to

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
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lynda M Salvatore whose telephone number is 703-305-4070.

The examiner can normally be reached on M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Terrel Morris can be reached on 703-308-2414. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9310 for regular communications and 703-872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

ls 
July 24, 2002


CHERYL A. JUSKA
PRIMARY EXAMINER